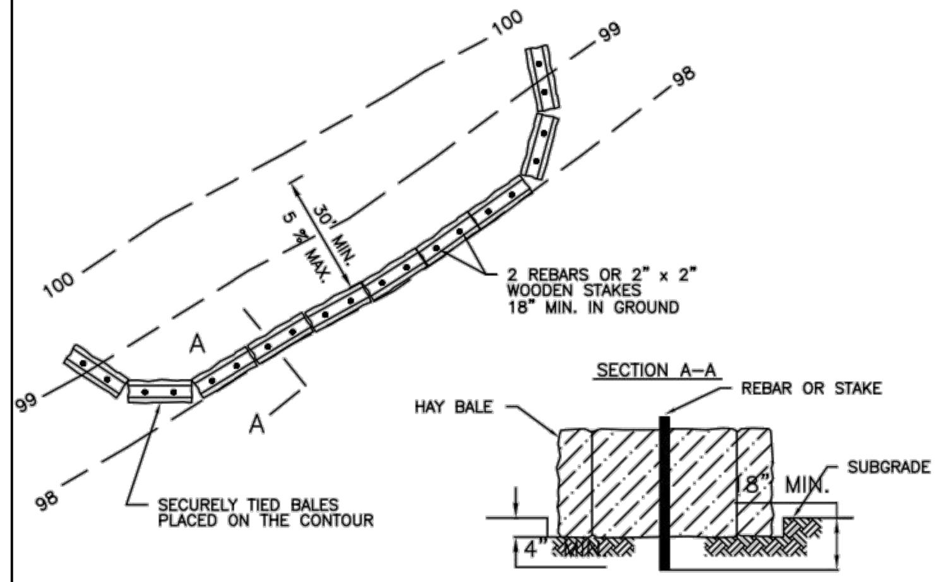


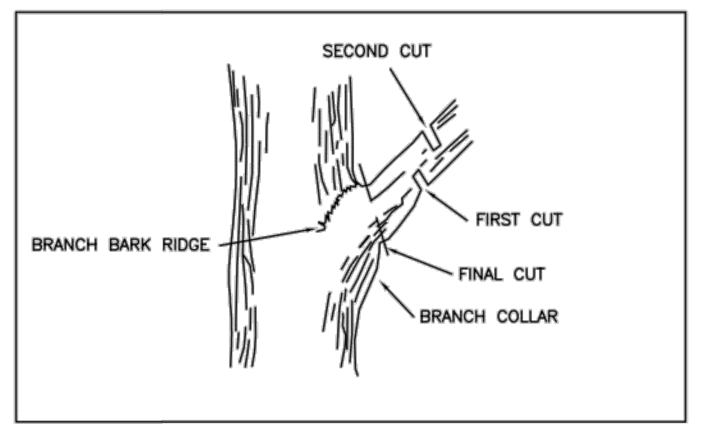
NOTES:

1. PLACE HAY BALE SEDIMENT FILTERS AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
2. ALL BALES SHALL BE SECURELY TIED AND PLACED AS SHOWN WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
3. EACH BALE SHALL BE EMBEDDED IN THE SUBGRADE A MINIMUM OF 4 INCHES.
4. EACH BALE SHALL BE SECURELY ANCHORED IN PLACE BY TWO #4 REBARS OR 2" x 2" WOODEN STAKES DRIVEN THROUGH THE BALES AND INTO THE GROUND A MINIMUM OF 1 1/2 FEET. THE FIRST ROD IN EACH BALE SHALL BE DRIVEN TOWARDS THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER.
5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE AS PROMPTLY AS POSSIBLE.
6. HAY BALE SEDIMENT FILTERS SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT UNLESS OTHERWISE INSTRUCTED BY THE TOWNSHIP ENGINEER.

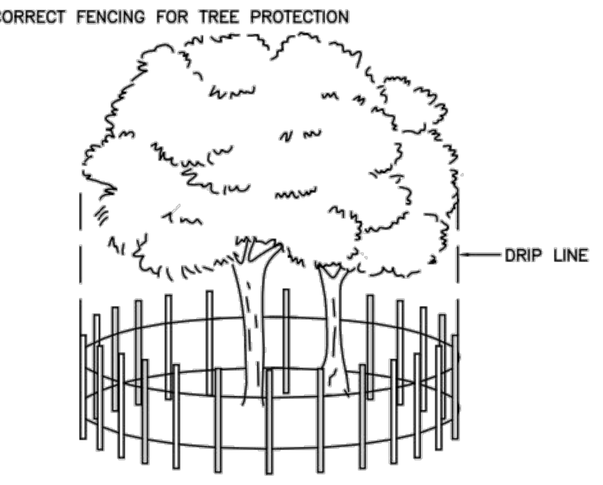
HAY BALE SEDIMENT FILTER DETAIL

NOT TO SCALE

REMOVAL OF TREE LIMB

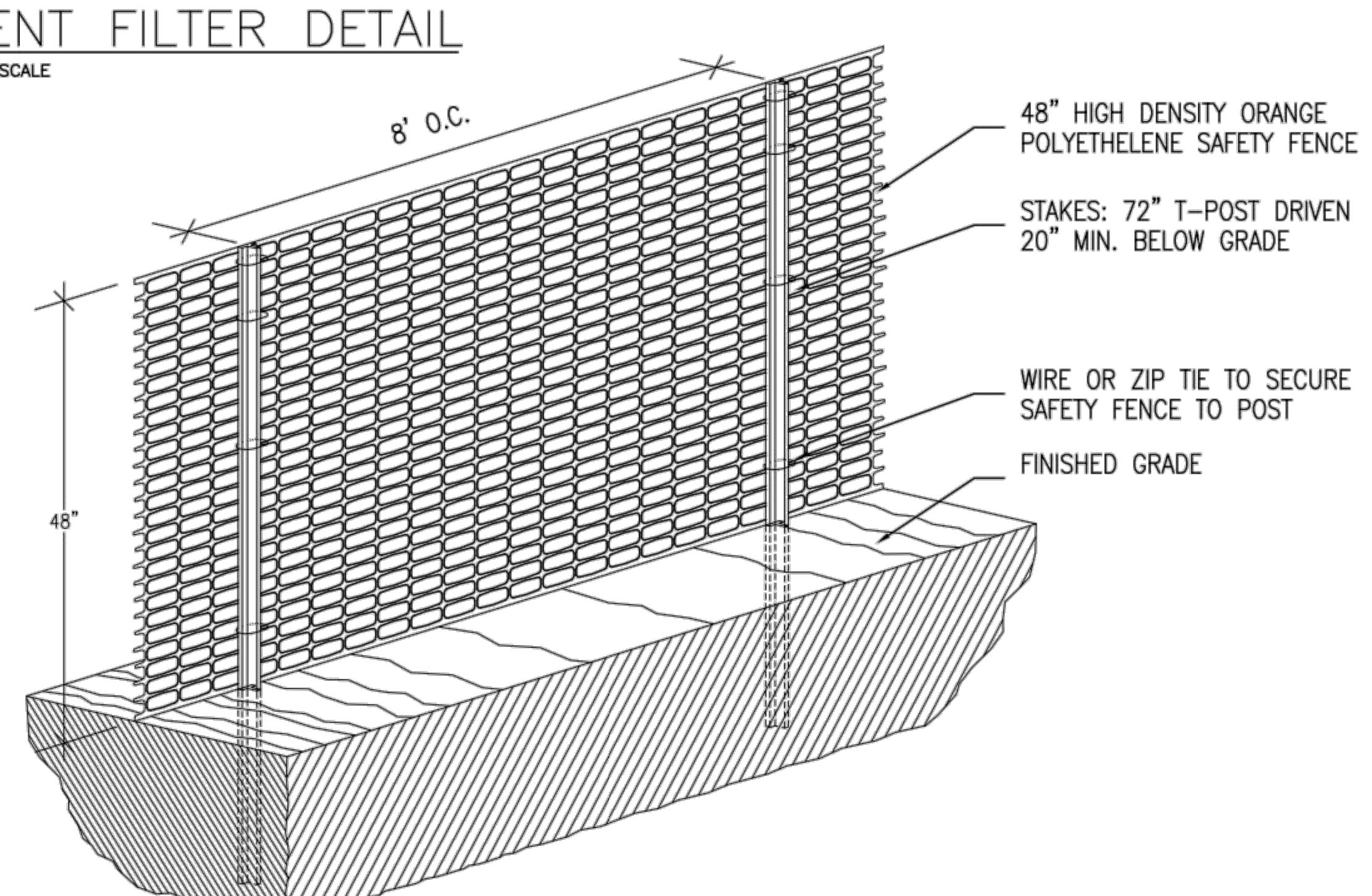


CORRECT FENCING FOR TREE PROTECTION



TREE PROTECTION DETAIL

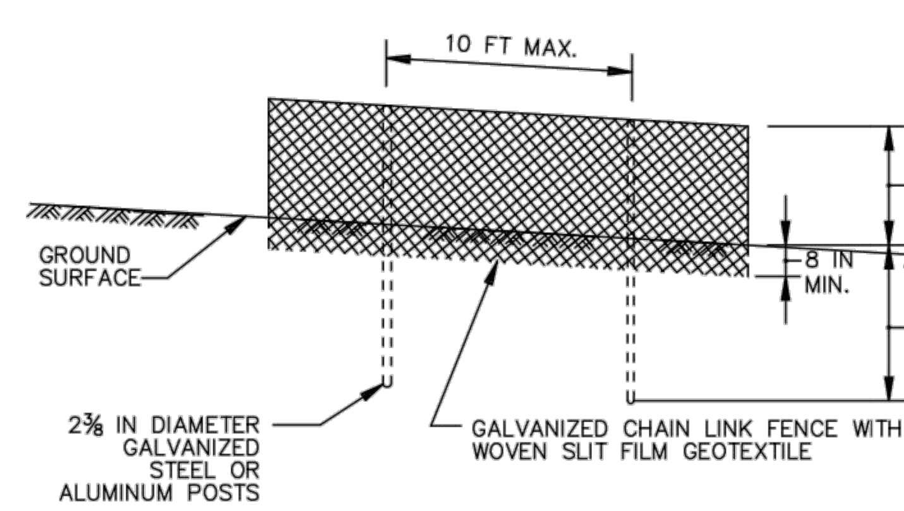
NOT TO SCALE



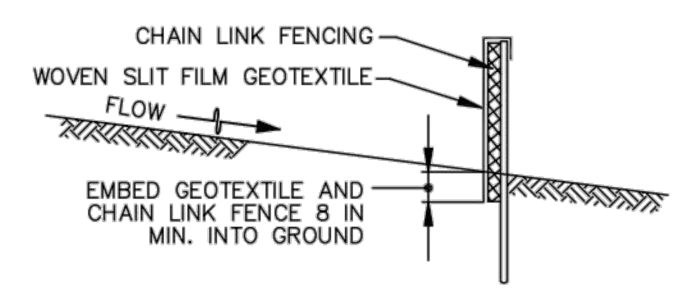
NOTES:
1. ALL SENSITIVE AREAS SHALL BE PROTECTED AS PER PLAN.
2. ALL TREES IN THE CONSTRUCTION AREA NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PRESERVED AND PROTECTED WITH HIGH VISIBILITY FENCE.
3. WHEN PRACTICABLE, INSTALL HIGH VISIBILITY FENCE 3 FEET OUTSIDE OF DRIP LINE.
4. SAFETY FENCE SHOULD BE FASTENED SECURELY TO THE T-POSTS.
5. THE FENCING MUST REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION; ANY CHANGE OF THE PROTECTIVE FENCING MUST BE APPROVED.

ORANGE SAFETY FENCING

SUPER SILT FENCE



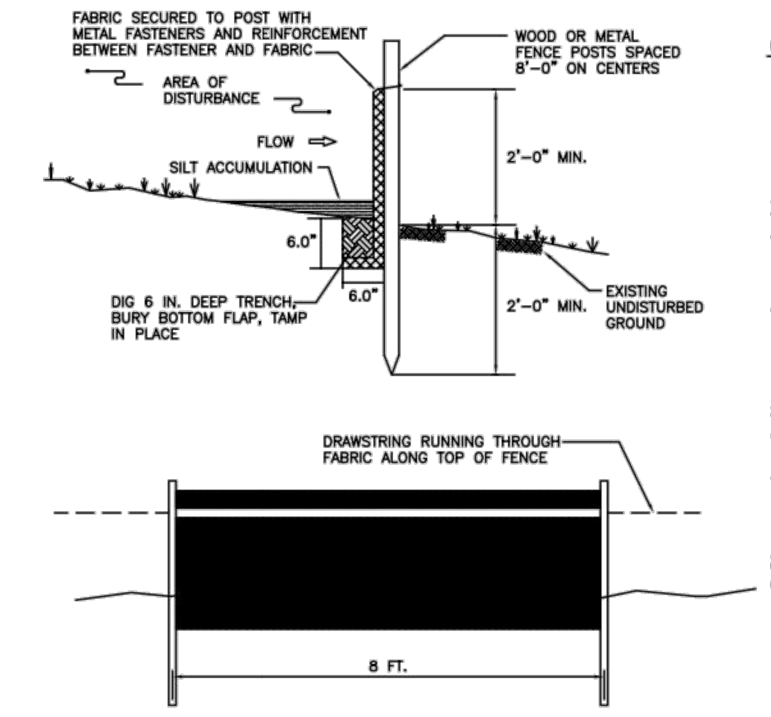
ELEVATION



CROSS SECTION

CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

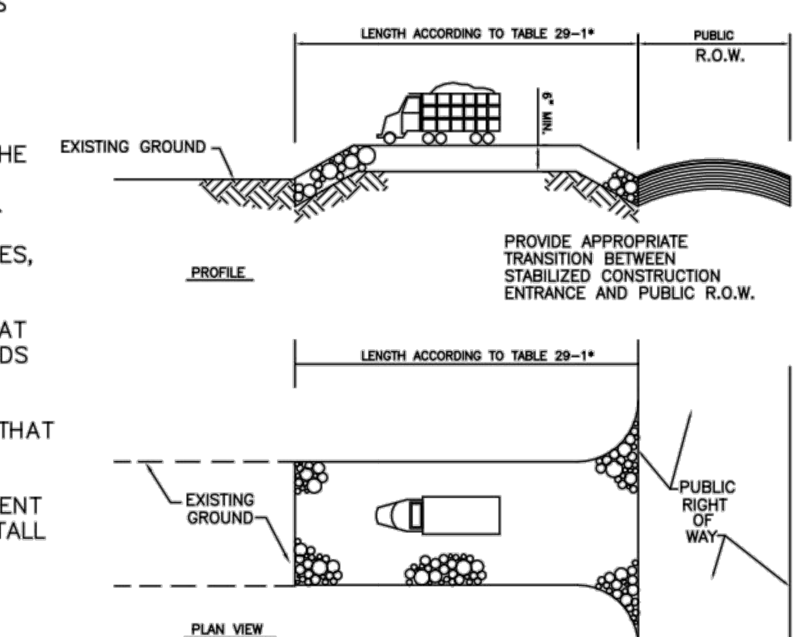


REQUIREMENTS FOR SILT FENCE:

1. FENCE POSTS SHALL BE SPACED 8 FEET CENTER-TO-CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND EXTEND AT LEAST 2 FEET ABOVE GROUND (FIG. 25-2). POSTS SHALL BE CONSTRUCTED OF HARDWOOD WITH A MINIMUM DIAMETER THICKNESS OF 1 1/2 INCHES.
2. A METAL FENCE WITH 6 INCH OR SMALLER OPENINGS AND AT LEAST 2 FEET HIGH MAY BE UTILIZED, FASTENED TO THE FENCE POSTS, TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEOTEXTILE FABRIC WHERE SPACE FOR OTHER PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED.
3. A GEOTEXTILE FABRIC, RECOMMENDED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE THE GROUND. THE FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM CONSISTING OF METAL FASTENERS (NAILS OR STAPLES) AND A HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHERS, ETC.) PLACED BETWEEN THE FASTENER AND THE GEOTEXTILE FABRIC. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH.

SILT FENCE

NOT TO SCALE



STABILIZED CONSTRUCTION ACCESS

NOT TO SCALE

LENGTHS OF CONSTRUCTION EXITS ON SLOPING ROADBEDS

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0-2%	50 FT.	100 FT.
2-5%	100 FT.	200 FT.
>5%	ENTIRE SURFACE STABILIZED	WITH FABC BASE COURSE

CHATHAM TOWNSHIP – SOIL EROSION AND SEDIMENT CONTROL NOTES

1. All soil erosion and sediment control practices on this plan will be constructed in accordance with the "New Jersey Standards for Soil Erosion and Sediment Control,' (revised 1987) and will be in place prior to any soil disturbance or in their proper sequence and maintained until permanent protection is established.
2. Chatham Township will be notified 72 hours prior to any land disturbance.
3. During and after construction, the owner will be responsible for the maintenance and upkeep of the drainage structures, vegetative cover, and any other measures deemed appropriate by the Township.
4. A crushed stone vehicle wheel cleaning blanket will be installed wherever a construction access road intersects any paved roadway. Said blanket will be composed of 2%' crushed stone, will be.at least 50 feet long and the width of the exit roadway or driveway, and will be properly maintained.
5. All paved roadways must be kept clean at all times.
6. All new roadways and driveways will be treated with a suitable subbase upon establishment of final grade elevations.
7. Disturbed areas shall be maintained in a rough graded condition and temporarily seeded and mulched until proper weather conditions exist for the establishment of permanent vegetative cover.
8. All soil stockpiled for a period of greater than 30 days will be temporarily seeded and mulched.
9. Stockpiles shall not be located within 50 feet of a floodplain, slope, drainage facility, or roadway. All stockpile bases shall be protected by a hay bale barrier or sediment fence.
10. Immediately following– initial disturbance or rough grading, all critical areas subject to erosion will receive a temporary seeding in combination with straw mulch or suitable equal, at a 9 tonlacre ratio rate, according to State Standards.
11. Temporary Stabilization – Any disturbed area that will be left exposed for more than thirty (30) days and not subject to construction activities shall immediately be stabilized upon disturbance by applying the following:
    a) Ground limestone at a rate of 90 pounds per 1,000 square feet.
    b) Fertilizer at a rate of 14 pounds per 1,000 square feet using a 10-20-10 analysis or an equivalent worked into the soil a minimum of 4'.
    c) Seed shall be Annual Ryegrass applied at not less than I pound per 1,000 square feet.
    d) Mulch all newly seeded area with unrotted salt hay or small grain straw at a rate of 90 pounds per -1,000 square feet according to the NJ standard. Mulch shall not be ground into short pieces and in no case shall more than 5 days elapse between seeding and mulching.
    e) Mulch shall be anchored with a liquid mulch binder applied at a rate of I gal./I000 sf. or by approved methods (i.e. peg and twine, mulch netting).
12. Between October I and March I and when the season prohibits temporary seeding or when disturbed areas are scheduled for immediate landscaping, applying the aforementioned items 'd)" and 'e)' will be adequate.
13. Seeding Dates: The following are recommended seeding dates for the establishment of temporary or permanent vegetation.
    a) SPRING–. (March I – May 15)
    b) FALL–. (August 15 – October 1)
14. Permanent vegetative cover is to be established on exposed areas within 10 days after final grading. Mulch is to be used for protection until final vegetation is established.
15. Permanent seeding and stabilization to be in accordance with the Standards for permanent vegetative cover – all exposed surfaces will be treated with 4" of topsoil prior to final stabilization and the following items applied at the designated rates:
    a) Lime shall be applied at 90 pounds per 1,000 square feet consisting of ground limestone incorporated into the top 4' of topsoil.
    b) Fertilizer shall be 14 pounds per 1,000 square feet 10-20-10 incorporated into the top 4" of topsoil.
    c) Seed in maintained lawn areas shall be 25 pounds per acre of Kentucky Bluegrass, 15 pounds per acre of Red Fescue, Spreading Fescue at 15 pounds per acre, and 10 pounds per acre of Perennial Ryegrass. In areas of steep slopes use seed mixture of 15 pounds per acre of Deertongue or 20 pounds per acre of Switchgrass and 1 pound per acre of Redtop and 10 pounds per acre of Birdsfoot trefoil.
    d) Mulch all newly seeded area with unrotted salt hay or small grain straw at a rate of 90 pounds per 1,000 square feet according to the NJ standard. Mulch shall not be ground into short pieces and in no case shall more than 5 days elapse between seeding and mulching.
    e) Mulch in steep slope areas shall be anchored with a erosion control blanket, mulch in all other areas to be anchored with peg and twine, mulch netting or approved equal.
16. The site shall, at all times, be graded and maintained such that all storm water run-off is diverted to soil erosion and sediment control facilities.
17. All dewatering operations must discharge directly into a sediment filter area. The sediment filter should be composed of a suitable filter fabric filter.
18. All sedimentation structures will be inspected and maintained on a regular basis.
19. All storm drain inlets shall be protected with gravel filters to prevent entry of sediment carried by runoff water until vegetation and I or paving is established.
20. All storm drainage outlets will be stabilized as required before the discharge points become operational.
21. All trees to remain after construction are to be protected with tree protection devices or sediment barriers.
22. The Township may request additional measure to minimize on or off site erosion problems during construction.
23. Sequence of Construction
    a) Install orange safety fencing and signs along top of slope and limit of disturbance —— 1 day
    b) Excavate and install the subsurface detention including overflow (1000±sf). Remove excess material & stabilize all disturbed area. —— 5 days
    c) Remove three (3) trees in the steep slope area behind the proposed house, excavate trench for the storm & sanitary sewer connections, connect to the sewer main and detention system respectively (1700±sf) and stabilized all disturbed areas —— 5 days
    d) Excavate building foundation and begin construction —— 8 months
    e) Install sanitary and storm sewer connection down the steep slope areas and connect to the sewer main and drywell system —— 2 days
    f) Remove the super silt fence —— 1 day
    g) Place topsoil on exposed areas, seed, mulch and fertilize. —— 5 days
    h) Install and anchor erosion control blanket in accordance with the recommended standards —— 3 days

NOTE: EROSION BLANKET TO BE INSTALLED OVER A PROPERLY PREPARED SEEDING BED

(SEE SOIL EROSION AND SEDIMENT CONTROL NOTE #15)

EASTCOAST erosion blankets

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www.eastcoasterosion.com

Material and Performance Specification

ECSC-2™ Double Net Straw/Coconut Rolled Erosion Control Product

Description: The ECSC-2™ is made with uniformly distributed 70% agricultural straw, 30% coconut fiber and two polypropylene nets securely sewn together with degradable thread. The tightly compressed blankets are wrapped and include a product label, code and installation guide. The blankets are palletized for easy transportation.
The ECSC-2™ has functional longevity of approximately 24 months, but will vary depending on soil and climatic conditions, and is suitable for slopes 2:1 to 1:1 and low to medium flow channels. The ECSC-2™ meets Type 3.B specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.17.

Materials:

Netting	Matrix	Thread
Top Medium weight Photodegradable Polypropylene 0.75" x 0.75" Opening	70% Agricultural Straw 0.393 lbs yd² 213.2 g/m²	Degradable 1.50" stitch spacing
Bottom Lightweight Photodegradable Polypropylene 0.50" x 0.50" Opening	30% Coconut Fiber 0.169 lbs yd² 91.7 g/m²	

Roll Sizes:

	Standard	Mega
Width:	7.5 ft (2.3 m)	15.0 ft (4.6 m)
Length:	120.0 ft (36.6 m)	120.0 ft (36.6 m)
Weight ±10%:	57.0 lbs (25.9 kg)	114.0 lbs (51.7 kg)
Area:	100 yd² (83.6 m²)	200 yd² (167.2 m²)
#/Pallet:	20	16 & 20

Index Value Properties*:

Property	Test Method	Typical
Mass/Unit Area	ASTM D6475	9.00 oz/yd² (305.1 g/m²)
Thickness	ASTM D6525	.30 in (7.6mm)
Tensile Strength MD	ASTM D6818	178 lb/ft (2.6 kN/m)
Elongation MD	ASTM D6818	31.3 %
Tensile Strength TD	ASTM D6818	148 lb/ft (2.2 kN/m)
Elongation TD	ASTM D6818	22.4 %
Light Penetration	ASTM D6567	13 %
Water Absorption	ASTM D1117	436 %

* May differ depending upon raw material variations

Bench-Scale Testing* (NTPEP*):**

Test Method	Parameters	Results
ECTC Method 2 Rainfall	50mm (2in) / hr 30 min	SLR**=8.52
	100mm (4in) / hr 30 min	SLR**=11.01
	150mm (6in) / hr 30 min	SLR**=14.28
ECTC Method 3 Shear Resistance	Shear at .50 in soil loss	2.16 lb/ft²
ECTC Method 4 Germination	Top soil; Fescue; 21 day incubation	503% improvement

*Bench scale tests should not be used for design purposes.
**Soil Loss Ratio=Soil Loss Bare Soil/Soil Loss with RECP=1/C-Factor
***The preceding test data excerpts were reproduced with the permission of AASHTO, however, this does not constitute endorsement or approval of the product, material or device by AASHTO

Slope Performance Design Values*:

Property	Test Method	Value		
Manning's N		0.029		
C-Factors	ASTM D6459			
Slope Length (L)	≤ 3:1	3:1-2:1	≥ 2:1	
< 50 ft (15 m)	0.017	0.028	0.080	
50 ft – 100 ft	0.031	0.059	0.125	
>100 ft (30 m)	0.080	0.090	0.170	

*Large Scale Results obtained by 3rd Party & A Accredited independent Laboratory

Channel Performance Design Values*:

Property	Test Method	Value
Unvegetated Shear Stress	ASTM D 6460	2.60 lbs/ft² (124 Pa)
Unvegetated Velocity	ASTM D 6460	8.0 ft/s (2.4 m/s)
Vegetated Shear Stress	NA	NA
Vegetated Velocity	NA	NA

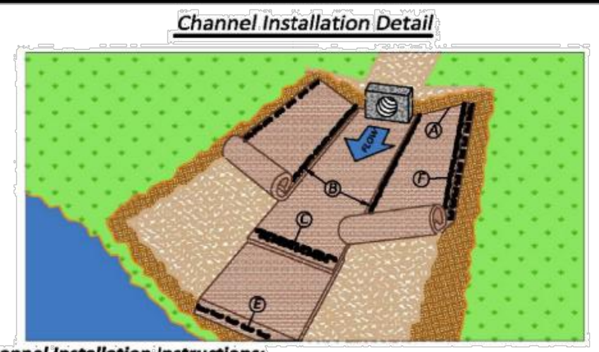
*Large-Scale Results obtained by 3rd Party & A Accredited independent Laboratory

Proud Member of: Product Participant of: QDOR and MADE IN USA

The values presented are for guidance purposes and do not constitute the practice of engineering. East Coast Erosion Blankets LLC (ECEB) ascertains that at the time of manufacture, all information presented herein is accurate and reliable and falls within the ECEB manufacturing product specification variances. If the product does not meet the stated values and ECEB is notified in writing prior to installation, the product will be replaced at no cost to the purchaser. ECEB will not be held liable for any type of damage or losses, directly, or indirectly for failure of this product. Current revision supersedes all previous versions for this product.

Revised 01012013

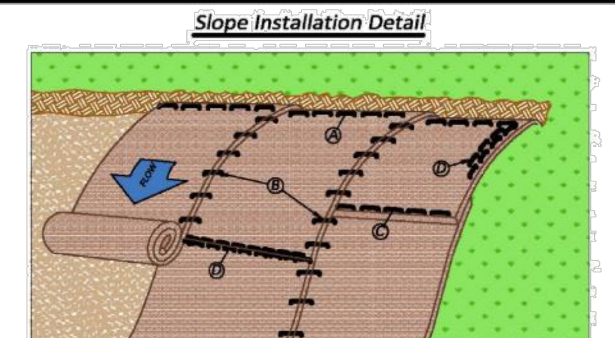
Channel Installation Detail



Channel Installation Instructions:

1. *Dig a 6" by 6" trench both up-slope, down-slope, and along the top side of the channel. Prepare the slope soil surface (raking, seeding and fertilizing).Note, if used with stormwater discharge, place the up-slope trench at the face of the discharge structure footer.*
2. *Begin by placing the center blanket a minimum of 12" down-slope of the up-slope trench. Secure the blanket at the bottom of the trench with staples placed 12" apart. Backfill and compact the trench. Apply seed, and fold the blanket over soil, secure with a row of staples placed 12" apart across the width of the blanket (See Diagram A).*
3. *Roll the blanket vertically down the slope. Secure using the appropriate staple pattern below, specified by slope. (See Staple Patterns)*
4. *Continue placing blankets up the slopes on both sides, with a minimum 4" overlapping (Diagram B), and securing each blanket in the beginning trench (Diagram A).*
5. *Additional horizontal blankets can be joined using a minimum 4" overlapping or shingle style in the direction of water flow. Connect the blankets by placing staples approximately 5" apart across the width of the blankets. (Diagram C)*
6. *For maximum performance a check slot should be placed at 25'-40' intervals. Place a row of staples 4" apart along the entire width of the channel. A second row should be placed 4" below in a staggered pattern. (Diagram D)*
7. *The end of the blanket must be secured in a 6" x 6" trench by a row of staples placed at 12" intervals. (Diagram E)*
8. *At the top edge of the side slope, fasten the blanket in a 6" x 6" trench with staples placed at 12" intervals. Install an additional row of staples 1'-0" down slope of the trench along the width of the fabric. (Diagram F)*

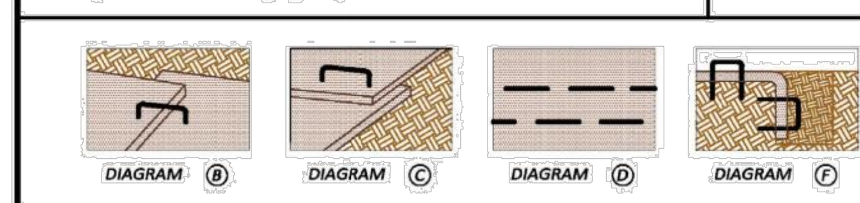
Slope Installation Detail



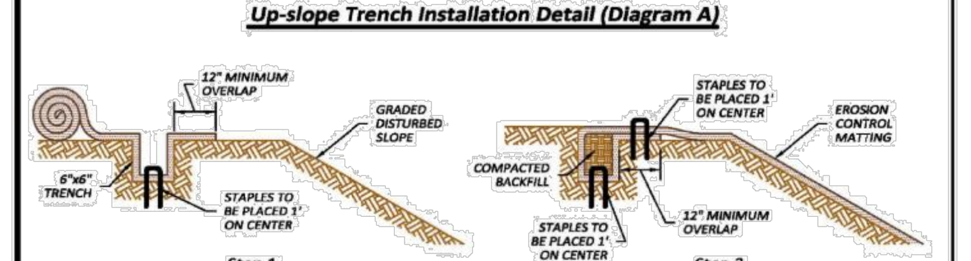
Slope Installation Guidelines:

These guidelines are recommendations only. Any questions with the installation should be confirmed with your local distributor.

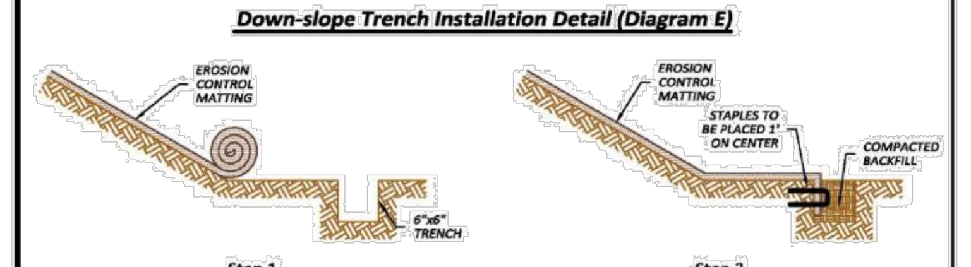
1. *Dig a 6" by 6" trench both up-slope and down-slope of the area the matting is to be applied. Prepare the slope soil surface (raking, seeding and fertilizing).*
2. *Begin by placing the blanket a minimum of 12" down-slope of the up-slope trench. Secure the blanket at the bottom of the trench with staples placed 12" apart. Backfill and compact the trench. Apply seed, and fold the blanket over soil, secure with a row of staples placed 12" apart across the width of the blanket. (See Diagram A)*
3. *Roll the blanket vertically down the slope. Secure using the appropriate staple pattern below, specified by slope. (See Staple Patterns)*
4. *Parallel blankets must be overlapped by a minimum of 4", and secured with a row of staples placed approximately 3'-0" apart. (See Diagram B)*
5. *Additional vertical blankets can be joined using a minimum 4" overlapping or shingle style (See Diagrams C) in the direction of water flow. Connect the blankets by placing staples approximately 12" apart across the width of the blankets.*
6. *For maximum performance a check slot should be placed at 25'-40' intervals. Place a row of staples 4" apart along the entire width of the slope. A second row should be placed 4" below in a staggered pattern. Then continue with general installation. (See Diagrams D)*
7. *The end of blanket must be secured in a 6" x 6" trench with a row of staples placed at 12" intervals. (Diagram E)*



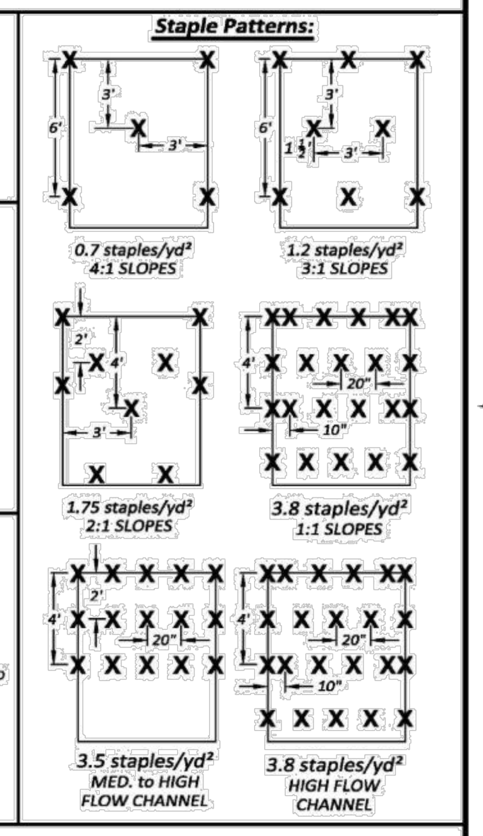
Up-slope Trench Installation Detail (Diagram A)



Down-slope Trench Installation Detail (Diagram E)



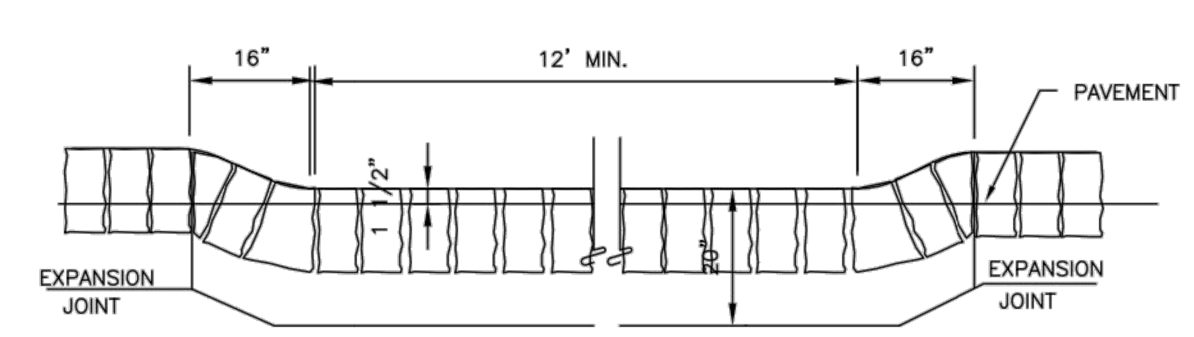
Staple Patterns:



EASTCOAST erosion blankets
443 Bricker Road Bernville, PA 19506
Toll Free: 1-800-582-4005 * Phone: +1-610-488-8496 * Fax: +1-610-488-8494

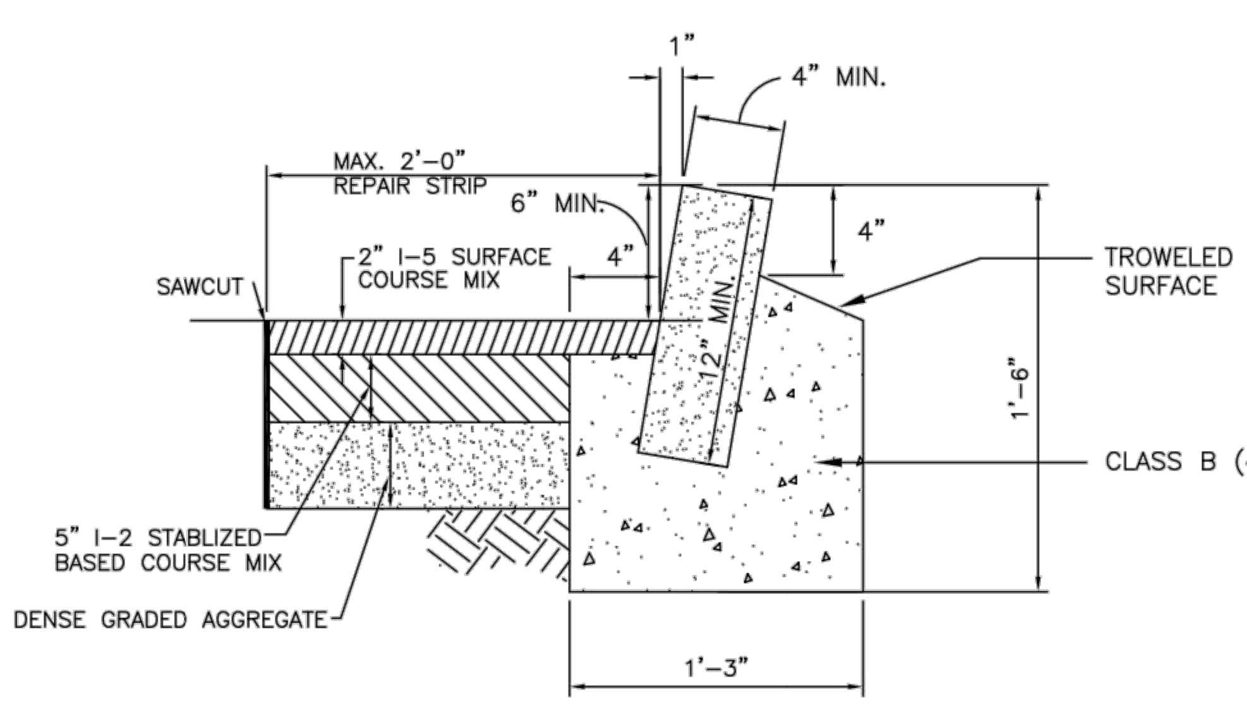
Proud Member of:

1" = 20'



DEPRESSED CURB AT DRIVEWAY DETAIL

NOT TO SCALE



ROADWAY OPENING CURB DETAIL

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Murphy & Hollows Associates LLC
CIVIL ENGINEERING AND SURVEYING
192 CENTRAL AVENUE, STIRLING, NJ 07980
908.580.1255 murphyhollows@gmail.com

NO.	DATE	COMMENT

APPROVAL STAMPS AND SIGNATURES

DRAWING TITLE	BSCAN STICKER
PROPOSED 1-FAMILY DWELLING	

PROJECT NAME AND ADDRESS
35 SUSAN DRIVE, CHATHAM
MORRIS COUNTY, NJ

PROJECT DESCRIPTION
DETAILS

OWNER'S NAME AND ADDRESS
MR. & MRS. HAPPINESS DIRU

SEAL	DRAWN BY	SCALE: AS SHOWN
	CHECKED BY: RA	DATE: 08.17.2018
	FILE	BUILDING PLAN ID NUMBER
	PAGE NO.: 05 OF 18	A- 103